

REMARKS

Claims 46, 48, 52-56, 58, 62-68 are pending in the application.

Claims 47, 49-51, 57, 59-61, 69-70 have been cancelled.

Claims 46, 48, 56, 58, and 68 have been amended.

Claims 46-50, 52-60 and 62-70 are rejected.

Claims 51 and 61 are objected to but indicated as allowable

DETAILED ACTION

1. This action is in response to the amendment filed on: 09/14/2007, and drawings filed on: 10/30/2007.

2. Claims 1-45 are cancelled. Claims 46-70 are new. Claims 46, 56, and 68 are new.

3. The following rejections are withdrawn in view of new grounds of rejections necessitated by amendment:

Claims 1, 3, 4, 17, 32, 34, and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al in further view of CTAN and Taylor, Claims 2, 18, and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al, CTAN and Taylor in further view of Lahey et al, Claims 6, 7, 14, 37, and 38 rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al, CTAN and Taylor in further view of Hansen, Claims 10, 13, 41, and 44 rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al, CTAN, and Taylor, in further view of Hull, Claims 8, 9, 24, 25, 39, and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al, CTAN, and Taylor, and Hull, in further view of Altamura et al, and Claims 15 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al, CTAN and Taylor in further view of Nakagiri et al and MacLean et al.

Drawings

4. The drawings filed on: 10/30/2007 are accepted/approved by the Examiner.

Allowable Subject Matter

5. Claims 51 and 61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

6. Claims 46, 47, 49, 50, 53, 55, 68, 69, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US Application: US 2003/0167271 A1, published: Sep. 4, 2003, filed: Aug. 28, 2001), in view of CTAN (Dante, published: October 2002, page 1) and further in view of Shimada et al (US Patent: 7,010,745 B1, issued: Mar. 7, 2006, filed: Jun. 27, 2000).

With regards to claim 46, Arnold et al teaches:

Scanning the pages of the book to produce scanned pages; generating original PDF pages from respective said scanned pages (paragraphs 0004-0005: whereas, pages from books are scanned into RDO format, and then converted to created PDF pages), said original PDF pages corresponding to respective pages of the book, wherein said original PDF pages have content areas of text or graphics or both and non-content areas surrounding the content areas (Arnold et al, paragraph 0211, claim 18: whereas, the PDF pages contain image data gathered from a RDO file, an also, contain margin data (non-content/white space area) from a RDO file).

However, Arnold does not expressly teach:

Creating on each of said original PDF pages, a bounding box of minimal size to enclose all of the respective said content areas, each said bounding box defining a respective cropped PDF page. Selecting a feature common to all of said cropped PDF pages, Discarding said cropped PDF pages, Aligning all of said original PDF pages in a PDF representation of the book using said selected feature to prevent an appearance of page jumping between succeeding pages in the PDF representation of the book. Yet CTAN teaches Creating on each of said original PDF pages, a bounding box of minimal size to enclose all of the respective said

content areas, each said bounding box defining a respective cropped PDF page (page 1: whereas, "PDFCROP takes a PDF file as input, calculates the Bounding Box for each page by the help of ghost script, and generates an output PDF file with removed margins" (where the margins are white space/non-content areas that border the content, and all cropped content is saved in a single output PDF file)). It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold's page scanning system, such that cropped PDF pages are defined using a bounding box, as similarly taught by CTAN. The combination of Arnold and CTAN would have allowed Arnold et al's PDF generating' system to have been able to have produced PDFs that are reduced in size for optimal storage and manipulation purposes.

Yet, Shimada teaches, selecting a feature common to all of said cropped PDF pages (column 3, lines 1-20: whereas, an area/feature common to page images is determined/selected, and the page images are precropped. The precropping occurring during a correction stage (column 10, lines 6-19), Discarding said cropped PDF pages (cropped page images are temporarily stored in post-justification image buffer (14) (column 7, lines 13-28), and images not used/discarded after the stage 12 of Fig. 1), Aligning all of said original PDF pages in a PDF representation of the book using said selected feature to prevent an appearance of page jumping between succeeding pages in the PDF representation of the book (column 3, lines 19-37: whereas the selected feature is used to prevent the image of "shifting"/page jumping between succeeding pages in the images of the book).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold et al, and CTAN's PDF cropped images such that Arnold's page images (PDF pages) are also processed to be aligned, as taught by Shimada. The combination of Arnold, CTAN, and Shimada would have allowed Arnold to have "reduced the unpleasant look of [page] images when these numerous [page] images are viewed in succession" (Shimada, column 2, lines 56-63).

With regards to claim 47, which depends on claim 46, Arnold et al teaches using one of said cropped PDF pages as an alignment standard for said feature (column 11, lines 45-52: whereas, the alignment standard is the image with the largest number of edges).

With regards to claim 49, which depends on claim 47, wherein said using further comprises identifying a largest of said cropped PDF pages as said alignment standard; as explained in claim 46, Shimada teaches using the selected feature, and also Shimada et al (column 11, lines 45-52) also further teaches the alignment standard is the image with the largest number of edges).

With regards to claim 50, which depends on claim 49, wherein selecting further comprises applying one or more predetermined alignment rules: as explained in claim 46, Shimada teaches the selecting, and also Shimada et al (column 11, lines 17-45) further teaches "regions that are congruent with the common area of the selected image and are in a position equivalent or the position of the common area within the selected image are extracted as the common area of the remaining images.

With regards to claim 53, which depends on claim 46, printing the PDF representation of the book, following said aligning: whereas, as similarly explained in the rejection for claim 46, the combination of Arnold, CTAN, and Shimada, teach the PDF representation of the book, and also Shimada (column 23, lines 19-23) further teaches whereas images of a book are printed on paper medium after aligning).

With regards to claim 55, which depends on claim 46, wherein said feature is a page number, a header, or a footer whereas as similarly explained in claim 46, Shimada similarly teaches said feature, and also Shimada (column 9, lines 7-18) teaches a header, footer, and page numbers are used as a feature).

With regards to claim 68, for an apparatus, performing a method similar to the method of claim 46, is rejected under similar rationale.

With regards to claim 69, which depends on claim 68, for performing a method similar to claim 47, is rejected under similar rationale.

With regards to claim 70, which depends on claim 69, for performing a method similar to claim 49, is rejected under similar rationale.

7. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US Application: US 2003/0167271 A1, published: Sep. 4, 2003, filed: Aug. 28, 2001), in view of CTAN (Dante, published: October 2002, page 1), in view of Shimada et al (US Patent: 7,010,745 B1, issued: Mar. 7, 2006, filed: Jun. 27, 2000), and further in view of Clune (US Patent: 7,187,810 B2, issued: Mar. 6, 2007, filed: Oct. 18, 2002).

With regards to claim 48, which depends on claim 47, Arnold et al, CTAN, and Shimada teach the cropped PDF pages, as similarly explained in the rejection for claim 46; and also Shimada teaches the page used as said alignment standard during said selecting, in the rejection for claim 47, and is rejected under similar rationale. However, Arnold et al, CTAN, and Shimada do not expressly teach displaying said cropped PDF pages used as said alignment standard during said selecting Clune teaches displaying said cropped pages used as said alignment standard during said selecting (Clune, Fig 3: images used as alignment standard are displayed) It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold et al, CTAN, and Shimada's pdf cropping and alignment system, such that the cropped pages are displayed, as taught by Clune. The combination of Arnold et al, CTAN, Shimada, and Clune would have allowed Arnold to have "provided methods to validating the correction for a misalignment between at least two images in a sequence of images of a sample" (Clune, Abstract).

8. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US Application: US 2003/0167271 A1, published: Sep. 4, 2003, filed: Aug. 28, 2001), in view of CTAN (Dante, published: October 2002, page 1), in view of Shimada et al (US Patent: 7,010,745 B1, issued: Mar. 7, 2006, filed:

Jun. 27, 2000), and further in view of Hull (US Patent: 5,832,110, issued: Nov. 3, 1998, filed: May. 28, 1996).

With regards to claim 52, which depends on claim 46, Arnold et al, CTAN, and Shimada similarly teach the cropped PDF pages with the selected feature on all of the cropped PDF pages aligned, as explained in the rejection for claim 46, and is rejected under the same rationale.

However, Arnold et al, CTAN, and Shimada do not expressly teach displaying the PDF representation of the book following the aligning.

Hull teaches displaying the cropped PDF pages with the selected feature on all of the cropped PDF pages aligned (column 1, lines 15-23: whereas, a user views a display of images and manually moves an image until the common points are displayed as aligned, and thus the pages are displayed as aligned.)

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold et al, CTAN, and Shimada's system for aligning cropped PDF pages, to further include an implementation to display aligned page data as taught by Hull. The combination would have allowed Arnold et al's system to have allowed "a person to have viewed both images", such that they are aligned accordingly (Hull, column 1, lines 18-20).

9. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US Application: US 2003/0167271 A1, published: Sep. 4, 2003, filed: Aug. 28, 2001), in view of CTAN (Dante, published: October 2002, page 1), in view of Shimada et al (US Patent: 7,010,745 B1, issued: Mar. 7, 2006, filed: Jun. 27, 2000), and further in view of Lahey et al (US Patent: 5,999,945, issued: Dec. 7, 1999, filed: Sep 15, 1997).

With regards to claim 54, which depends on claim 46, wherein Arnold et al, CTAN, and Shimada teach selecting a feature of cropped/segmented content, on each one of the cropped PDF pages as similarly explained in claim rejection 1,

and is rejected under the same rationale. However Arnold et al, CTAN, and Shimada do not teach a method for selecting a corner of the content of the pages.

Lahey et al teaches aligning a set of pages by aligning the corner of content to a particular corner in an output page (FIG 6b, column 8, lines 47-52: whereas a pages are aligned by choosing a corner, such as 'upper left').

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold et al, CTAN, and Shimada's method for selecting a feature of cropped/segmented PDF content, to further select a corner, for aligning as taught by Lahey et al. The combination of Arnold et al, CTAN, Shimada, and Lahey et al would have allowed Arnold et al's system to have been able to "specify the orientation and placement of a page" (Lahey et al, column 8, lines 49-50) using a specific location (corner) of content for more accurate alignment.

10. Claims 56, 57, 59, 60, 64, and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US Application: US 2003/0167271 A1, published: Sep. 4, 2003, filed: Aug. 28, 2001), in view of CTAN (Dante, published: October 2002, page 1), in view of Shimada et al (US Patent: 7,010,745 B1, issued: Mar. 7, 2006, filed: Jun. 27, 2000), and further in view of Cullen et al (US Patent: 6348980 B1, issued: Feb. 19, 2002, filed: Apr. 14, 2000).

With regards to claim 56, Arnold, CTAN, and Shimada teaches scanning the pages of the book, generating of original PDF pages from a set of scanned pages, said original PDF pages corresponding to respective pages of the book, wherein said original PDF pages corresponding to respective pages of the book, wherein said original PDF pages have content areas of text or graphics or both and non-content areas surrounding the content areas; creating on each of said original PDF pages, a transient bounding box of minimal size to enclose all of the respective said content areas, each said bounding box defining a respective cropped PDF page; selecting a feature of said cropped PDF pages, said feature being common to all of said cropped PDF pages of said set; discarding said cropped PDF pages; and aligning

all of said PDF pages in a PDF representation of the book using the respective said selected features to prevent an appearance of page jumping between succeeding pages in the PDF representation of the book, as similarly explained in the rejection for claim 46, and rejected under similar rationale.

However, Arnold, CTAN, and Shimada do not expressly teach scanning the pages ... in duplex mode having front and back scans to produce a first set of scanned pages from said front scans and a second set of scanned pages from said back scans. Yet, Cullen et al teaches scanning the pages ... in duplex mode having front and back scans to produce a first set of scanned pages from said front scans and a second set of scanned pages from said back scans (column 1, lines 45-65: whereas, a first set of pages are scanned for the front, and a second set of pages are scanned for the back). It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold, CTAN, and Shimada's scanning, selecting, and alignment system; such that the single set processing of page images, can also be dual set processing of page images for duplex mode, as taught by Cullen et al, thus .processing dual sets page images including feature selection, and bounding boxes.

The combination of Arnold, CTAN, Shimada, and Cullen et al would have allowed Arnold to have "implemented an improved method for handling two sided documents when copying, scanning, or faxing" (Cullen et al: column 1, lines 38-41).

With regards to claim 57, which depends on claim 56, for a method performing a method similar to the method of claim 47, is rejected under similar rationale.

With regards to claim 59, which depends on claim 57, for a method performing a method similar to the method of claim 49, is rejected under similar rationale.

With regards to claim 60, which depends on claim 59, for a method performing a method similar to the method of claim 50, is rejected under similar rationale.

With regards to claim 64, which depends on claim 56, for a method performing a method similar to the method of claim 53, is rejected under similar rationale.

With regards to claim 67, which depends on claim 56, for a method performing a method similar to the method of claim 55, is rejected under similar rationale.

11. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US Application: US 2003/0167271 A1, published: Sep. 4, 2003, filed: Aug. 28, 2001), in view of CTAN (Dante, published: October 2002, page 1), in view of Shimada et al (US Patent: 7,010,745 B1, issued: Mar. 7, 2006, filed: Jun. 27, 2000), in view of Cullen et al (US Patent: 6348980 B1, issued: Feb. 19, 2002, filed: Apr. 14, 2000), further in view of Clune (US Patent: 7,187,810 B2, issued: Mar. 6, 2007, filed: Oct. 18, 2002).

With regards to claim 58, which depends on claim 57, Arnold et al, CTAN, and Shimada teach the cropped PDF pages, as similarly explained in the rejection for claim 46; and also Shimada teaches the page used as said alignment standard during said selecting of the respective said feature, in the rejection for claim 47, and is rejected under similar rationale. However, Arnold et al, CTAN, Shimada, and Cullen et al do not expressly teach displaying said cropped PDF pages used as said alignment standard during said selecting

Clune teaches displaying said cropped pages used as said alignment standard during said selecting (Clune, Fig 3: images used as alignment standard are displayed) It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold et al, CTAN, Shimada, and Cullen et al's pdf cropping and alignment system, such that the cropped pages are displayed, as taught by Clune. The combination of Arnold et al, CTAN, Shimada, Cullen et al, and Clune would have allowed Arnold to have "provided methods to validating the correction for a misalignment between at least two images in a sequence of images of a sample" (Clune, Abstract).

12. Claims 62, and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US Application: US 2003/0167271 A1, published:

Sep. 4, 2003, filed: Aug. 28, 2001), CTAN (Dante, published: October 2002, page 1) and Cullen et al (US Patent: 6348980 B1, issued: Feb. 19, 2002, filed: Apr. 14, 2000), in further view of Nakagiri et al (US Patent: 6,616,359 B1, published: Sep. 9, 2003, filed: Nov. 2, 2000) and MacLean et al (US Application: US 2003/0103238 A1, published: Jun. 5, 2003, filed: Nov. 30, 2001).

With regards to claim 62, which depends on claim 56, Arnold et al, CTAN, and Shimada teach a method for aligning PDF pages to a (location of the) selected feature, in claim 46, and is rejected under the same rationale. Additionally, as similarly explained in the rejection for claim 56, Arnold, CTAN, and Shimada teach processing page images using a cropped PDF images of a first set and using cropped PDF images of a second set, a first feature, and a second feature.

However, Arnold et al, CTAN, and Shimada do not teach displaying all of said cropped PDF pages of said first set, then all of said cropped PDF pages of said second set; and receiving a user choice of said first feature, during said displaying of said first set, and a user choice of said second feature, during said displaying of said second set.

Nakagiri et al teaches selecting one grouping of pages (Abstract: whereas, a print job is selected which contains a grouping of pages to be printed), and previewing one of the selected pages of the selected grouping (Fig 28: whereas, one of the pages selected in the grouping are displayed in a preview window).

It would have been obvious to one of the ordinary skill in the art to have modified Arnold et al, CTAN, Shimada, and Cullen et al's PDF alignment system (which allows for a first set and a second set) to further have included the ability to select a group of pages, and previewing one of the pages in a grouping/set as taught by Nakagiri et al. The combination of Arnold et al, CTAN, Taylor, and Nakagiri et al would have allowed Arnold et al's system to select and preview a group of PDF pages, and to have further "manipulated pages while their previews are displayed and recognizing the correspondence between jobs and pages" (Nakagiri et al, column 1, 55-57).

However, Arnold et al, CTAN, Taylor, Nakagiri et al do not teach receiving a user choice of said feature during said displaying.

MacLean et al teaches receiving a user choice of said feature during said displaying: whereas, a user marks/annotate/apply-cursor to the content of a document (paragraph 0012: whereas the mark/cursor is used to correlate/align a second document displayed on a screen by locating the feature indicated by the mark/cursor in a second document), and furthermore the document is scanned and converted to a PDF (paragraph 0055, Fig 4, reference number 50).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold et al, CTAN, Shimada, Cullen et al, and Nakagiri et al's system for previewing a group of aligned PDF pages, to further include the ability to apply a cursor or mark to a PDF document as taught by MacLean et al, such that the cursor/mark is applied to one of the previewed PDF pages. The combination would have allowed a "correlation step by identifying at least one alignment point on the document" (MacLean et al, paragraph 0012).

With regards to claim 65, which depends on claim 54, Arnold et al, CTAN, Shimada, Cullen et al, Nakagiri et al, and MacLean similarly teaches manually selecting said features, in the rejection for claim 62, and is rejected under similar rationale.

13. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US Application: US 2003/0167271 A1, published: Sep. 4, 2003, filed: Aug. 28, 2001), in view of CTAN (Dante, published: October 2002, page 1), in view of Shimada et al (US Patent: 7,010,745 B1, issued: Mar. 7, 2006, filed: Jun. 27, 2000), in view of Cullen et al (US Patent: 6348980 B1, issued: Feb. 19, 2002, filed: Apr. 14, 2000), and further in view of Hull (US Patent: 5,832,110, issued: Nov. 3, 1998, filed: May. 28, 1996).

With regards to claim 63, which depends on claim 56, Arnold et al, CTAN, and Shimada similarly teach the cropped PDF pages with the selected feature on all of the cropped PDF pages aligned, as explained in the rejection for claim 46, and is rejected under the same rationale.

However, Arnold et al, CTAN, Shimada, and Cullen et al do not expressly teach displaying the PDF representation of the book following the aligning.

Hull teaches displaying the cropped PDF pages with the selected feature on all of the cropped PDF pages aligned (column 1, lines 15-23: whereas, a user views a display of images and manually moves an image until the common points are displayed as aligned, and thus the pages are displayed as aligned.)

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold et al, CTAN, Shimada, and Cullen et al's system for aligning cropped PDF pages, to further include an implementation to display aligned page data as taught by Hull. The combination would have allowed Arnold et al's system to have allowed "a person to have viewed both images", such that they are aligned accordingly (Hull, column 1, lines 18-20).

14. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US Application: US 2003/0167271 A1, published: Sep. 4, 2003, filed: Aug. 28, 2001), in view of CTAN (Dante, published: October 2002, page 1), in view of Shimada et al (US Patent: 7,010,745 B1, issued: Mar. 7, 2006, filed: Jun. 27, 2000), in view of Cullen et al (US Patent: 6348980 B1, issued: Feb. 19, 2002, filed: Apr. 14, 2000), and further in view of Lahey et al (US Patent: 5,999,945, issued: Dec. 7, 1999, filed: Sep 15, 1997).

With regards to claim 66, which depends on claim 56, wherein Arnold et al, CTAN, and Shimada teach selecting a feature of cropped/segmented content, on each one of the cropped PDF pages as similarly explained in claim rejection 46, and is rejected under the same rationale. However Arnold et al, CTAN, Shimada, and Cullen et al do not teach a method for selecting a corner of the content of the pages.

Lahey et al teaches aligning a set of pages by aligning the corner of content to a particular corner in an output page (FIG 6b, column 8, lines 47-52: whereas a pages are aligned by choosing a corner, such as 'upper left').

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Arnold et al, CTAN, Shimada, and Cullen et al's method for selecting a feature of cropped/segmented PDF content, to further select a corner, for aligning as taught by Lahey et al. The combination of Arnold et al, CTAN, Shimada, Cullen et al, and Lahey et al would have allowed Arnold et al's system to have been able to "specify the orientation and placement of a page" (Lahey et al, column 8, lines 49-50) using a specific location (corner) of content for more accurate alignment.

Response to Arguments

15. Applicant's arguments with respect to claims 46-70 have been considered but are moot in view of the new ground(s) of rejection.

Applicants' Comments on the Final Rejection.

The indication of allowability of claims 51 and 61 is noted and appreciated.

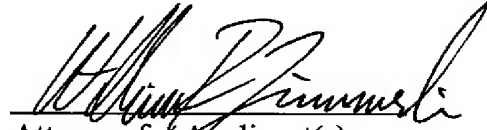
Claim 46 has been amended to include the subject matter of claims 47, and 49 -51 and is therefore considered allowable. Claims 48, and 52-55 are dependent from allowable claim 46 and are therefore also considered to be allowable. Claim 56 has been amended to include the subject matter of claims 62 and 59- 61 and is therefore considered allowable. Claims 58 and claims 62-67 are dependent from allowable claim 56 and are therefore also considered to be allowable. Independent claim 68 has been amended to include subject matter similar to allowable claims 46 and 56 and is therefore also considered to be allowable. Since all of the claims pending in the application are deemed allowable, the cited rejections are considered moot.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this

application is believed to be in condition for allowance, and it is requested that the final rejection be withdrawn and a notice of allowance be issued.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.